

U.S. Patent Application Serial No. 10/511,450
Amendment filed February 4, 2009
Reply to OA dated January 21, 2009

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A reflow soldering apparatus comprising a conveyor to transport circuit boards mounted with electronic components into multiple chambers, blowing means installed in said chambers and having vertical rotating shafts respectively, a first casing member having a fan storage section housing said blowing means and a gas guide section extending from said fan storage section in a direction perpendicular to a transport line of said conveyor, a second casing member connected to said gas guide section of said first casing member and having multiple heated gas nozzle holes on the side facing said conveyor, and a gas circulated by said blowing means and heated while passing through a heater installed within said apparatus and entered said second casing member from said gas guide section of said first casing member to be blown from said nozzle holes onto said circuit boards on said conveyor, wherein said ~~adjacent~~ blowing means are arrayed offset to the left and right ~~in a direction perpendicular to the transport line of said conveyor~~, said ~~adjacent~~ blowing means are installed to overlap as seen horizontally ~~from a direction perpendicular to the transport line of said conveyor~~, and said first casing member and said second casing member have a width smaller than the diameter of said blowing means.

Claim 2 (Canceled):

Claim 3 (Currently amended): A reflow soldering apparatus comprising a conveyor to transport circuit boards mounted with electronic components into multiple chambers, blowing means installed in said chambers and having vertical rotating shafts respectively, a first casing member having a fan storage section housing said blowing means and a gas guide section extending from said fan storage section in a direction perpendicular to a transport line of said conveyor, a second casing member connected to said gas guide section of said first casing member and having multiple heated gas nozzle holes on the side facing said conveyor, and a gas circulated by said blowing means and heated while passing through a heater installed within said apparatus and entered said second casing member from said gas guide section of said first casing member to be blown from said nozzle holes onto said circuit boards on said conveyor, wherein said ~~adjacent~~ blowing means are arrayed offset up and down ~~in a direction perpendicular to the transport line of said conveyor~~, said adjacent blowing means are installed to overlap as seen vertically ~~from a direction perpendicular to the transport line of said conveyor~~, and said first casing member and said second casing member have a width smaller than the diameter of said blowing means.

Claims 4-7 (Canceled):

Claim 8 (Currently amended): A reflow soldering apparatus comprising a conveyor to transport circuit boards mounted with electronic components into multiple chambers, blowing means installed in said chambers and having vertical rotating shafts respectively, a first casing member

having a fan storage section housing said blowing means and a gas guide section extending from said fan storage section in a direction perpendicular to a transport line of said conveyor, a second casing member connected to said gas guide section of said first casing member and having multiple heated gas nozzle holes on the side facing said conveyor, and a gas circulated by said blowing means and heated while passing through a heater installed within said apparatus and entered said second casing member from said gas guide section of said first casing member to be blown from said nozzle holes onto said circuit boards on said conveyor, wherein said ~~adjacent~~ blowing means are arrayed offset to the left and right ~~in a direction perpendicular to the transport line of said conveyor~~, said blowing means storage sections of the ~~adjacent~~ first casing members are installed to overlap as seen horizontally ~~from a direction perpendicular to the transport line of said conveyor~~, and said first casing member and said second casing member have a width smaller than the diameter of said blowing means.

Claim 9 (Canceled):

Claim 10: (Currently amended): A reflow soldering apparatus comprising a conveyor to transport circuit boards mounted with electronic components into multiple chambers, blowing means installed in said chambers and having vertical rotating shafts respectively, a first casing member having a fan storage section housing said blowing means and a gas guide section extending from said fan storage section in a direction perpendicular to a transport line of said conveyor, a second casing

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member connected to said gas guide section of said first casing member and having multiple heated gas nozzle holes on the side facing said conveyor, and a gas circulated by said blowing means and heated while passing through a heater installed within said apparatus and entered said second casing member from said gas guide section of said first casing member to be blown from said nozzle holes onto said circuit boards on said conveyor, wherein said ~~adjacent~~ blowing means are arrayed offset up and down ~~in a direction perpendicular to the transport line of said conveyor~~, said blowing means storage sections of the ~~adjacent~~ first casing members are installed to overlap as seen vertically ~~from a direction perpendicular to the transport line of said conveyor~~, and said first casing member and said second casing member have a width smaller than the diameter of said blowing means.

Claim 11 (Canceled):